

# Chelmsford Amateur Radio Society.

NEWSLETTER No.285

October 1989

## NEXT MEETING - Annual General Meeting and Yackit Night.

Tuesday 3rd October is the date for the Chelmsford Amateur Radio Society A.G.M. when we assemble to discuss the past, present and future of our activities.

The agenda will be :- Minutes of 1988 A.G.M.  
Chairmans report.  
Secretary's report.  
Treasurers report.  
Membership-Secretary's report.  
Presidents report  
Election of 1989/1990 committee.  
Matters arising.  
Set subscription rate for coming year.  
Any other business.

With the main business of the evening successfully completed we then plan to hold an open discussion 'Yackit' under the guidance of the Chairman on any subject of interest to the members, this can include topics such as aerials, earthing, station operation, radio interference, power supplies, etc, etc.

The meeting will begin at 7.30pm and we hope you will all be able to come along to The Marconi College, Arbour Lane, Chelmsford.

## JACKPOT RAFFLE.

In addition to the regular raffle, the draw from the cumulative collection of tickets set aside for each purchase made over the past six months will be made after the A.G.M.

The lucky winner will receive a free membership subscription for the coming year.

## DATES FOR YOUR DIARY.

3 Oct. C.A.R.S. ANNUAL GENERAL MEETING.  
16 Oct. ESSEX REPEATER GROUP A.G.M. - Danbury Village Hall, 8.00pm.  
7 Nov. CLUB MEETING - Sporadic E Propagation, Jim Bacon G3YLA.  
5 Dec. CLUB MEETING - Sale of Surplus Equipment.  
16 Dec. CLUB SOCIAL - Telford Lodge, Arbour Lane. (details later)

## TICKETS FOR THE NOVEMBER MEETING.

As mentioned previously, the October meeting is the last occasion when members have first choice of the seating tickets.

For the following month the remaining tickets will be available to visitors, we expect to receive some applications in response to R.S.G.B. news bulletins.

## LAST MONTHS MEETING - Richard G4ICP.

On this his third visit to CARS, Tony Gilbey treated us to a most interesting talk all about aerials for amateur radio communication, how they work, removing myth and magic from this evergreen and all important topic of our hobby.

We were reminded that radio communication depends on the radiation of electromagnetic waves from the transmitting aerial. The EM waves are created by the alternating RF currents in the aerial which arise from the coupling of the output of the transmitter into the aerial system.

Tony illustrated the coupling of a Tx to an aerial in some depth, using the quarter wave stub as an example. This most useful device is used for impedance matching, having the characteristics that imply any impedance exists between the extremes of the open and short circuit values somewhere over the length of the stub. Thus in attempting to couple a feeder to an aerial by trapping in at the right point of the stub, an effective match is obtained with all reactance cancelled out.

One of the mysteries of aerials is that talked about as Gain. Tony reminded us one does not get something for nothing and this is certainly true for aerials.

Power gain in the desired direction is obtained at the expense of signal radiation in the other directions. A radio wave may be focused in a direction so that the received signal sounds as though it comes from a much more powerful source. As power gain is expressed as a ratio (dB) in relative terms, we have to express the gain of any aerial in terms of a standard, this being that known as the Isotropic aerial (i), the theoretical aerial that radiates equally in all directions and so has a 'power gain' of zero.

However, in practical terms it is the half-wave dipole that is a sensible standard of comparison as its radiation pattern more closely resembles that of a real life aerial. It therefore has a 2.1 dB gain over the Isotropic (2.1dBi).

It is apparent that the published gain figure of any aerial can be increased by 2.1 dB by simply changing the comparison aerial from a dipole to an Isotropic. Those manufacturers who simply use 'dB' in sales literature only add to the confusion as this does not specify the basis of measurements.

Height of the aerial above ground is also very important and the lower the angle of the radiated wave the more effective 'DX Gain' in the desired direction. The minimum height for any aerial to show some respectable low angle radiation being one half wavelength.

## LAST MONTHS MEETING - continued,

When faced with the problem of lack of space for aerals, Tony explained how this can be overcome by using different types of loading. The general rule that applies is - big aerals have big gain, little aerals - little gain and minature aerals (coil loaded, for example) may even exhibit signal loss instead of signal gain.

As a finale Tony told us of his experiments with coaxial traps. By simply coiling up a length of UR43 coax cable and winding it around itself, connecting the inner of one end to the outer off the other and wiring the screens as line connectors, a 40 metre 'trap' can be made. (Since the meeting I have tried this out and can confirm that it does indeed work - and produces quite a spectacular 'dip' on my GDO!).

Using 40m traps, a multiband dipole can be made, offering a good compromise solution.

While there are many books available and articles written about the subject of aerals, it is always of immense value, and indeed a rare treat, to have an interesting and stimulating explanation of the subject given by a man of obvious authority, enabling us all, I'm sure, to benefit in some way from Tony's excellent talk. We all look forward to his next one.

## DF NEWS - Dick G3WHR.

### Part 1. NATIONAL QUALIFYING EVENT CHELMSFORD/COLCHESTER.

This was a two station event organised jointly by Chelmsford and Colchester Clubs on behalf of the R.S.G.B. Our event has a reputation to be proud of, and to maintain - that means lots of work in preparation and on the day of the contest. This year we even had a visit by another organiser to see "how to do it".

The 'A' transmitter was provided by Alan Williams, G4PQY/P was located by a river near Gt.Yeldham. Early arrivals to this site found the going underfoot a bit soft, for latecomers it was decidedly squelchy. Philip Cunningham was the first to find Alan, however he was unable to slip away without alerting some nearby hunters.

The 'B' transmitter was my responsibility, G3WHR/P was hidden in a wood near Stowmarket, amongst some fallen fir trees. As in previous years I was ably assisted by Fred our dummy operator. Its not easy to hide from 25+ determined hunters, so I was very pleased not to be found before 3 p.m.

Tea was provided at Sudbury Football Club. Here we were informed that one competitor was missing! Search teams soon "found" and revived him with numerous cups of tea.

Results:- (local competitors)

1 M. Hawkins	7 C. Merry	16 T. Gage
4 P. Cunningham	9 C. Baisden	18 W. Pechey
5 A. Mead	10 R. Emeny	19 P. Clark
6 P. Larbalestier	11 A. Collett	

Congratulations to Mike Hawkins and Andrew Mead who qualify for the National Final, how superb to have two Chelmsford qualifiers on our event.

### Part 2. THE 5th CHELMSFORD EVENT.

Fresh from his success with the Rx, Andrew took over the Tx for the final Chelmsford event of 1989. We had no difficulty in receiving G4KQE/P at Tiptree Heath, indeed the signal was strong enough for me to hear the amplitude modulation.

Mindful of the last event featuring G4KQE/P, (he was only 400 metres from the start) I set off towards Coggeshall. A small difference in bearing gave an intercept near Halstead - time to get a move on. Two bearings later I was investigating the old railway track East of Halstead. Ian was first on site and we were soon joined by the others. Though not needed at the start, a good torch was now essential.

My Rx indicated two strong signal areas; unfortunately I made the wrong choice and spent some time at the wrong end of the aerial. Finally I came close enough to Andrew to induce feedback via the mic - even then it wasn't easy to find him.

Results:-	Time	Time	Time
1 Ian Butson	8.34	3 Roy Emeny	8.52
2 Dick Brocks	8.49	4 Philip Cunningham	8.53
		5 Andy Collet	8.54
		6 Alan Williams	9.01

### Part 3. FUTURE EVENTS - THE MID-ESSEX TROPHY.

This annual event will be held on Sunday 15th October, using OS map 155, Bury St.Edmunds. For start details please contact me nearer the day, tea afterwards will be on the usual Bring-a-Bite basis.

## COMMITTEE MEETING.

The October Committee Meeting will be held in the Telford Lodge (Marconi College Residence) at 7:45pm on Wednesday, 11th October. You are most welcome to join us.

73 from Roy & Ela Martyr, G3PMX & G6HKM

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## MEMBERS ADVERTISEMENTS

### WANTED.

Does anyone still have any three-pin valve holders at the bottom of their junk-boxes, marked Z560035 for the Diode EA50, as used in WW2 sets and early TV receivers. Roy G3PMX.